



SEQUENCE LISTING

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<120> HEREGULIN VARIANTS

<130> 402E-476112US

<140> US 10/082,747

<141> 2002-02-22

<150> US 09/101,544

<151> 1998-07-17

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<150> US 08/799,054

<151> 1997-02-10

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1 5 10 15  
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20 25 30  
Leu Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln Asn Tyr  
35 40 45  
Val Met Ala Ser Phe Tyr Lys His Leu Gly Ile Glu Phe Met Glu Ala  
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1 5 10 15  
Gly Gly Glu Cys Phe Met Val Lys Asp Leu Ser Asn Pro Ser Arg Tyr  
20 25 30  
Leu Cys Lys Cys Gln Pro Gly Phe Thr Gly Ala Arg Cys Thr Glu Asn  
35 40 45  
Val Pro Met Lys Val Gln Asn Gln Glu Lys Ala Glu Glu Leu Tyr Gln  
50 55 60  
Lys Arg  
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<213> Homo sapiens

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Gly Gly Glu Cys Phe Met Val Lys Asp Leu Ser Asn Pro Ser Arg Tyr  
 20 25 30  
 Leu Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln Asn Tyr  
 35 40 45  
 Val Met Ala Ser Phe Tyr Lys Ala Glu Glu Leu Tyr Gln Lys Arg  
 50 55 60

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 1 5 10 15  
 Gly Gly Glu Cys Phe Met Val Lys Asp Leu Ser Asn Pro Ser Arg Tyr  
 20 25 30  
 Leu Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln Asn Tyr  
 35 40 45  
 Val Met Ala Ser Phe Tyr Ser Thr Ser Thr Pro Phe Leu Ser Leu Pro  
 50 55 60  
 Glu  
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 1 5 10 15  
 Gly Gly Glu Cys Phe Thr Val Lys Asp Leu Ser Asn Pro Ser Arg Tyr  
 20 25 30  
 Leu Cys Lys Cys Gln Pro Gly Phe Thr Gly Ala Arg Cys Thr Glu Asn  
 35 40 45  
 Val Pro Met Lys Val Gln Thr Gln Glu Lys Ala Glu Glu Leu Tyr Gln  
 50 55 60

Lys Arg

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<213> Rattus rattus

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15

Gly Gly Glu Cys Phe Thr Val Lys Asp Leu Ser Asn Pro Ser Arg Tyr

20

25

30

Leu Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln Asn Tyr

35

40

45

Val Met Ala Ser Phe Tyr Lys His Leu Gly Ile Glu Phe Met Glu Ala

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55

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Glu Glu Leu Tyr Gln Lys Arg

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<213> Rattus rattus

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5

10

15

Gly Gly Glu Cys Phe Thr Val Lys Asp Leu Ser Asn Pro Ser Arg Tyr

20

25

30

Leu Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln Asn Tyr

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40

45

Val Met Ala Ser Phe Tyr Lys Ala Glu Glu Leu Tyr Gln Lys Arg

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<213> Rattus rattus

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Ser	His	Leu	Ile	Lys	Cys	Ala	Glu	Lys	Glu	Lys	Thr	Phe	Cys	Val	Asn
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Gly	Gly	Glu	Cys	Phe	Thr	Val	Lys	Asp	Leu	Ser	Asn	Pro	Ser	Arg	Tyr
			20				25						30		
Leu	Cys	Lys	Cys	Gln	Pro	Gly	Phe	Thr	Gly	Ala	Arg	Cys	Thr	Glu	Asn
		35				40						45			
Val	Pro	Met	Phe	Tyr	Ser	Thr	Ser	Thr	Pro	Phe	Leu	Ser	Leu	Pro	Glu
50						55					60				

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<211> 81

<212> PRT

<213> Rattus rattus

<400> 9

Ser	His	Leu	Ile	Lys	Cys	Ala	Glu	Lys	Glu	Lys	Thr	Phe	Cys	Val	Asn
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Gly	Gly	Glu	Cys	Phe	Thr	Val	Lys	Asp	Leu	Ser	Asn	Pro	Ser	Arg	Tyr
			20				25						30		
Leu	Cys	Lys	Cys	Gln	Pro	Gly	Phe	Thr	Gly	Ala	Arg	Cys	Thr	Glu	Asn
		35				40						45			
Val	Pro	Met	Phe	Tyr	Ser	Met	Thr	Ser	Arg	Arg	Lys	Arg	Gln	Glu	Thr
50						55					60				
Glu	Lys	Pro	Leu	Glu	Arg	Lys	Leu	Phe	His	Ser	Leu	Val	Lys	Glu	Ser
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Lys															

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<213> Homo sapiens

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1	5	10	15
Gly Gly Glu Cys Phe Met Val Lys Asp Leu Ser Asn Pro Ser Arg Tyr			
20	25	30	
Leu Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln Asn Tyr			
35	40	45	
Val Met Ala Ser Phe Tyr Ser Thr Ser Thr Pro Phe Leu Ser Leu Pro			
50	55	60	
Glu			
65			

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 <213> Homo sapiens

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1 5 10 15
Gly Gly Glu Cys Phe Met Val Lys Asp Leu Ser Asn Pro Ser Arg Tyr
20 25 30
Leu Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln Asn Tyr
35 40 45
Val Met Ala Ser Phe Tyr Ser Thr Ser Thr Pro Phe Leu Ser Leu Pro
50 55 60
Glu
65

B1  
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<210> 12  
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 <212> PRT  
 <213> Homo sapiens

<400> 12
Ser His Leu Val Lys Cys Ala Glu Lys Glu Lys Thr Phe Cys Val Asn
1 5 10 15
Gly Gly Glu Cys Phe Met Val Lys Asp Leu Ser Asn Pro Ser Arg Tyr
20 25 30
Leu Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln Asn Tyr

35 40 45  
Val Met Ala Ser Phe Tyr Ser Thr Ser Thr Pro Phe Leu Ser Leu Pro  
50 55 60

Glu  
65

<210> 13  
<211> 71  
<212> PRT  
<213> Gallus domesticus

<400> 13  
Ser His Leu Thr Lys Cys Asp Ile Lys Gln Lys Ala Phe Cys Val Asn  
1 5 10 15  
Gly Gly Glu Cys Tyr Met Val Lys Asp Leu Pro Asn Pro Pro Arg Tyr  
20 25 30  
Leu Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln Asn Tyr  
35 40 45  
Val Met Ala Ser Phe Tyr Lys His Leu Gly Ile Glu Phe Met Glu Ala  
50 55 60  
Glu Glu Leu Tyr Gln Lys Arg  
65 70

<210> 14  
<211> 49  
<212> PRT  
<213> Not relevant (recombinant)

<400> 14  
Ser His Leu Val Lys Cys Ala Glu Lys Glu Lys Thr Phe Cys Val Asn  
1 5 10 15  
Gly Gly Glu Cys Phe Met Val Lys Asp Pro Ser Arg Tyr Leu Cys Lys  
20 25 30  
Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln Asn Tyr Val Met Ala  
35 40 45  
Ser

<210> 15  
 <211> 48  
 <212> PRT  
 <213> Homo sapiens

<400> 15  
 Asn Ser Asp Ser Glu Cys Pro Leu Ser His Asp Gly Tyr Cys Leu His  
 1 5 10 15  
 Asp Gly Val Cys Met Tyr Ile Glu Ala Leu Asp Lys Tyr Ala Cys Asn  
 20 25 30  
 Cys Val Val Gly Tyr Ile Gly Glu Arg Cys Gln Tyr Arg Asp Leu Arg  
 35 40 45

<210> 16  
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<400> 16  
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 1 5 10 15  
 Gly Gly Glu Cys Phe Met Val Lys Asp Pro Ser Arg Tyr Leu Cys Lys  
 20 25 30  
 Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln Asn Tyr Val Ile Ala  
 35 40 45  
 Ser

<210> 17  
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<400> 17  
 Trp Glu Leu Val Pro Cys Gly Trp Asp Arg Glu Gly Phe Cys Val Asn  
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 Gly Gly Glu Cys Phe Met Val Lys Asp Leu Ser Asn Pro Ser Arg Tyr  
 20 25 30

B1  
 Cont.

Leu Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln Asn Tyr  
 35 40 45  
 Val Ile Ala Ser  
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 1 5 10 15  
 Gly Gly Glu Cys Tyr Lys Val Arg Ile Tyr Gly Tyr Leu Met Cys Lys  
 20 25 30  
 Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln Asn Tyr Val Ile Ala  
 35 40 45  
 Ser

<210> 19  
 <211> 49  
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 <213> Not relevant (recombinant)

B1  
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 <400> 19  
 Trp Glu Leu Val Pro Cys Gly Trp Asp Arg Glu Gly Phe Cys Val Asn  
 1 5 10 15  
 Gly Gly Glu Cys Tyr Lys Val Arg Ile Tyr Gly Tyr Leu Met Cys Lys  
 20 25 30  
 Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln Asn Tyr Val Ile Ala  
 35 40 45  
 Ser

<210> 20  
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 <212> PRT

<213> Not relevant (recombinant)

<400> 20

Trp Glu Leu Val Pro Cys Gly Trp Asp Arg Glu Gly Phe Cys Val Asn  
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Gly Gly Glu Cys Tyr Lys Val Arg Ile Tyr Arg Tyr Arg Met Cys Lys  
20 25 30  
Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln Asn Tyr Val Ile Ala  
35 40 45  
Ser

<210> 21

<211> 49

<212> PRT

<213> Not relevant (recombinant)

<400> 21

Ser His Leu Val Lys Cys Ala Glu Lys Glu Lys Thr Phe Cys Val Asn  
1 5 10 15  
Gly Gly Glu Cys Phe Met Val Lys Asp Tyr Gly Tyr Leu Met Cys Lys  
20 25 30  
Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln Asn Tyr Val Ile Ala  
35 40 45  
Ser

<210> 22

<211> 52

<212> PRT

<213> Not relevant (recombinant)

<400> 22

Ser His Leu Val Lys Cys Gly Glu Glu Arg Glu Gly Phe Cys Val Asn  
1 5 10 15  
Gly Gly Glu Cys Tyr Arg Val Lys Thr Leu Ser Asn Pro Ser Arg Tyr  
20 25 30  
Leu Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln Asn Tyr

35  
Val Met Ala Ser  
50

40

45

<210> 23  
<211> 49  
<212> PRT  
<213> Not relevant (recombinant)

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Ser His Leu Val Lys Cys Gly Glu Glu Arg Glu Gly Phe Cys Val Asn  
1 5 10 15  
Gly Gly Glu Cys Phe Met Val Lys Asp Tyr Gly Tyr Leu Met Cys Lys  
20 25 30  
Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln Asn Tyr Val Met Ala  
35 40 45  
Ser

<210> 24  
<211> 49  
<212> PRT  
<213> Not relevant (recombinant)

<400> 24  
Ser His Leu Val Lys Cys Gly Glu Glu Arg Glu Gly Phe Cys Val Asn  
1 5 10 15  
Gly Gly Glu Cys Tyr Arg Val Lys Thr Tyr Gly Tyr Leu Met Cys Lys  
20 25 30  
Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln Asn Tyr Val Met Ala  
35 40 45  
Ser

<210> 25  
<211> 52  
<212> PRT  
<213> Not relevant (recombinant)

<400> 25

Ser	His	Leu	Val	Lys	Cys	Gly	Glu	Glu	Arg	Glu	Gly	Phe	Cys	Val	Asn
1				5					10					15	
Gly	Gly	Glu	Cys	Phe	Met	Val	Lys	Asp	Leu	Ser	Asn	Pro	Ser	Arg	Tyr
			20					25						30	
Leu	Cys	Lys	Cys	Pro	Asn	Glu	Phe	Thr	Gly	Asp	Arg	Cys	Gln	Asn	Tyr
			35					40						45	
Val	Ile	Ala	Ser												
			50												

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<212> PRT

<213> Not relevant (recombinant)

<400> 26

Ser	His	Leu	Val	Lys	Cys	Ala	Glu	Lys	Glu	Lys	Thr	Phe	Cys	Val	Asn
1				5					10					15	
Gly	Gly	Glu	Cys	Tyr	Arg	Val	Lys	Thr	Tyr	Gly	Tyr	Leu	Met	Cys	Lys
			20					25						30	
Cys	Pro	Asn	Glu	Phe	Thr	Gly	Asp	Arg	Cys	Gln	Asn	Tyr	Val	Met	Ala
			35					40						45	
Ser															

<210> 27

<211> 49

<212> PRT

<213> Not relevant (recombinant)

<400> 27

Ser	His	Leu	Val	Lys	Cys	Ala	Glu	Lys	Glu	Lys	Thr	Phe	Cys	Val	Asn
1				5					10					15	
Gly	Gly	Glu	Cys	Tyr	Arg	Val	Lys	Thr	Tyr	Gly	Tyr	Leu	Met	Cys	Lys
			20					25						30	
Cys	Pro	Asn	Glu	Phe	Thr	Gly	Asp	Arg	Cys	Gln	Asn	Tyr	Val	Ile	Ala
			35					40						45	

Ser

<210> 28

<211> 52

<212> PRT

<213> Not relevant (recombinant)

<400> 28

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 1              5              10              15
Gly Gly Glu Cys Tyr Arg Val Lys Thr Leu Ser Asn Pro Ser Arg Tyr
          20          25          30
Leu Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln Asn Tyr
          35          40          45
Val Ile Ala Ser
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<210> 29

<211> 52

<212> PRT

<213> Not relevant (recombinant)

<400> 29

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 1              5              10              15
Gly Gly Glu Cys Tyr Arg Val Lys Thr Leu Ser Asn Pro Ser Arg Tyr
          20          25          30
Leu Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln Asn Tyr
          35          40          45
Val Ile Ala Ser
50
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<210> 30

<211> 49

<212> PRT

<213> Not relevant (recombinant)

<400> 30

Ser His Leu Val Lys Cys Gly Glu Glu Arg Glu Gly Phe Cys Val Asn  
1 5 10 15  
Gly Gly Glu Cys Phe Met Val Lys Asp Tyr Gly Tyr Leu Met Cys Lys  
20 25 30  
Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln Asn Tyr Val Ile Ala  
35 40 45  
Ser

<210> 31

<211> 49

<212> PRT

<213> Not relevant (recombinant)

<400> 31

Ser His Leu Val Lys Cys Gly Glu Glu Arg Glu Gly Phe Cys Val Asn  
1 5 10 15  
Gly Gly Glu Cys Tyr Arg Val Lys Thr Tyr Gly Tyr Leu Met Cys Lys  
20 25 30  
Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln Asn Tyr Val Ile Ala  
35 40 45  
Ser

<210> 32

<211> 49

<212> PRT

<213> Not relevant (recombinant)

<400> 32

Ser His Leu Val Lys Cys Ala Glu Lys Glu Lys Thr Phe Cys Val Asn  
1 5 10 15  
Gly Gly Glu Cys Tyr Arg Val Lys Thr Tyr Gly Tyr Leu Met Cys Lys  
20 25 30  
Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln His Tyr Val Ile Ala  
35 40 45  
Ser

<210> 33  
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<400> 33  
 Ser His Leu Val Lys Cys Gly Glu Glu Arg Glu Gly Phe Cys Val Asn  
 1 5 10 15  
 Gly Gly Glu Cys Tyr Arg Val Lys Thr Tyr Gly Tyr Leu Met Cys Lys  
 20 25 30  
 Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln His Tyr Val Ile Ala  
 35 40 45  
 Ser

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<210> 36  
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<213> Not relevant (recombinant)

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Thr Arg Asp Lys Thr

1 5

<210> 37

<211> 5

<212> PRT

<213> Not relevant (recombinant)

<400> 37

Asp Asp Asp Asp Lys

1 5

<210> 38

<211> 5

<212> PRT

<213> Homo sapiens

<400> 38

Ser His Leu Val Lys

1 5

<210> 39

<211> 5

<212> PRT

<213> Not relevant (recombinant)

<400> 39

Trp Arg Leu Val Pro

1 5

<210> 40

<211> 5

<212> PRT

<213> Not relevant (recombinant)

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Trp Ser Leu Gln Pro  
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<213> Not relevant (recombinant)

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Trp Glu Leu Val Pro  
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Trp Ser Leu Val Lys  
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<210> 43  
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<213> Not relevant (recombinant)

<400> 43  
Trp Ser Leu Ile Pro  
1 5

<210> 44  
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<213> Not relevant (recombinant)

<400> 44  
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1 5

<210> 45

<211> 5

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<213> Not relevant (recombinant)

<400> 45

Trp Ala Leu Val Pro

1 5

<210> 46

<211> 5

<212> PRT

<213> Not relevant (recombinant)

<400> 46

Trp Ser Leu Gln Lys

1 5

<210> 47

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<213> Not relevant (recombinant)

<400> 47

Trp Glu Leu Val Ala

1 5

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<400> 48

Trp Ser Leu Glu Pro

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1 5

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<400> 53

Gly Trp Asp Arg Glu Gly

1

5

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<213> Not relevant (recombinant)

<400> 54

Gly Val Gln Arg Glu Gly

1

5

<210> 55

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<212> PRT

<213> Not relevant (recombinant)

<400> 55

Gly Glu Glu Arg Ala Gly

1

5

<210> 56

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<213> Not relevant (recombinant)

<400> 56

Gly Lys Glu Arg Glu Gly

1

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<210> 57

<211> 6

<212> PRT

<213> Not relevant (recombinant)

<400> 57

Thr Asn Ser Arg Glu Gly

1 5

<210> 58

<211> 6

<212> PRT

<213> Not relevant (recombinant)

<400> 58

Asp Lys Ser Arg Glu Gly

1 5

<210> 59

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<213> Not relevant (recombinant)

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Gly Glu Asp Arg Lys Gln

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<210> 60

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<212> PRT

<213> Not relevant (recombinant)

<400> 60

Gly Arg Glu Arg Glu Gly

1 5

<210> 61

<211> 5

<212> PRT

<213> Homo sapiens

<400> 61

Val Asn Gly Gly Glu

1 5

<210> 62

<211> 5

<212> PRT

<213> Not relevant (recombinant)

<400> 62

Val Asn Gly Gly Glu

1 5

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<211> 5

<212> PRT

<213> Not relevant (recombinant)

<400> 63

Val Asn Gly Gly Val

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<213> Not relevant (recombinant)

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Val Asn Gly Gly Gln

1 5

<210> 65

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<213> Homo sapiens

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Phe Met Val Lys Asp

1 5

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Tyr Lys Val Arg Ile  
1 5

<210> 67  
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<400> 67  
Phe Arg Val Lys Thr  
1 5

<210> 68  
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<400> 68  
Tyr Arg Val Lys Thr  
1 5

<210> 69  
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<212> PRT  
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<400> 69  
Tyr Met Ile Lys Tyr  
1 5

<210> 70

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Tyr Met Val Lys Thr  
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Met Arg Val Arg Thr  
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Pro Ser Arg Tyr Leu  
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<400> 75

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<213> Not relevant (recombinant)

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Thr His Tyr Arg Gly

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Thr His Tyr Arg Met

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Tyr Lys Tyr Arg Met

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<400> 79

Thr Lys Tyr Arg Gly

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<213> Not relevant (recombinant)

<400> 80

Tyr Lys Tyr Arg Leu

1

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Lys Cys Pro Asn Glu Phe

1

5

<210> 82

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<400> 82

Arg Cys Ser Leu Glu Phe

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Arg Cys Ser Glu Glu Phe

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<210> 85

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Arg Cys Thr Val Glu Tyr

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<210> 86

<211> 6

<212> PRT

<213> Not relevant (recombinant)

<400> 86

Arg Cys Thr Val Glu Tyr

1

5

21  
cont

<210> 87  
<211> 6  
<212> PRT  
<213> Not relevant (recombinant)

<400> 87  
Lys Cys Asn Ser Glu Phe  
1 5

<210> 88  
<211> 6  
<212> PRT  
<213> Not relevant (recombinant)

<400> 88  
Arg Cys Lys Lys Glu Phe  
1 5

<210> 89  
<211> 5  
<212> PRT  
<213> Homo sapiens

<400> 89  
Gln Asn Tyr Val Met  
1 5

<210> 90  
<211> 5  
<212> PRT  
<213> Not relevant (recombinant)

<400> 90  
Gln Trp Tyr Val Ile  
1 5

<210> 91  
<211> 5

B1  
Ent

<212> PRT

<213> Not relevant (recombinant)

<400> 91

Gln His Tyr Val Ile

1 5

<210> 92

<211> 52

<212> PRT

<213> Homo sapiens

<400> 92

Ser His Leu Val Lys Cys Ala Glu Lys Glu Lys Thr Phe Cys Val Asn

1 5 10 15

Gly Gly Glu Cys Phe Met Val Lys Asp Leu Ser Asn Pro Ser Arg Tyr

20 25 30

Leu Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln Asn Tyr

35 40 45

Val Met Ala Ser

50

<210> 93

<211> 645

<212> PRT

<213> Homo sapiens

<400> 93

Met Ser Glu Arg Lys Glu Gly Arg Gly Lys Gly Lys Gly Lys Lys Lys

1 5 10 15

Glu Arg Gly Ser Gly Lys Lys Pro Glu Ser Ala Ala Gly Ser Gln Ser

20 25 30

Pro Ala Leu Pro Pro Gln Leu Lys Glu Met Lys Ser Gln Glu Ser Ala

35 40 45

Ala Gly Ser Lys Leu Val Leu Arg Cys Glu Thr Ser Ser Glu Tyr Ser

50 55 60

Ser Leu Arg Phe Lys Trp Phe Lys Asn Gly Asn Glu Leu Asn Arg Lys

65 70 75 80

Asn Lys Pro Gln Asn Ile Lys Ile Gln Lys Lys Pro Gly Lys Ser Glu  
                     85                    90                    95  
 Leu Arg Ile Asn Lys Ala Ser Leu Ala Asp Ser Gly Glu Tyr Met Cys  
                     100                    105                    110  
 Lys Val Ile Ser Lys Leu Gly Asn Asp Ser Ala Ser Ala Asn Ile Thr  
                     115                    120                    125  
 Ile Val Glu Ser Asn Glu Ile Ile Thr Gly Met Pro Ala Ser Thr Glu  
                     130                    135                    140  
 Gly Ala Tyr Val Ser Ser Glu Ser Pro Ile Arg Ile Ser Val Ser Thr  
 145                    150                    155                    160  
 Glu Gly Ala Asn Thr Ser Ser Ser Thr Ser Thr Ser Thr Thr Gly Thr  
                     165                    170                    175  
 Ser His Leu Val Lys Cys Ala Glu Lys Glu Lys Thr Phe Cys Val Asn  
                     180                    185                    190  
 Gly Gly Glu Cys Phe Met Val Lys Asp Leu Ser Asn Pro Ser Arg Tyr  
                     195                    200                    205  
 Leu Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln Asn Tyr  
                     210                    215                    220  
 Val Met Ala Ser Phe Tyr Lys His Leu Gly Ile Glu Phe Met Glu Ala  
 225                    230                    235                    240  
 Glu Glu Leu Tyr Gln Lys Arg Val Leu Thr Ile Thr Gly Ile Cys Ile  
                     245                    250                    255  
 Ala Leu Leu Val Val Gly Ile Met Cys Val Val Ala Tyr Cys Lys Thr  
                     260                    265                    270  
 Lys Lys Gln Arg Lys Lys Leu His Asp Arg Leu Arg Gln Ser Leu Arg  
                     275                    280                    285  
 Ser Glu Arg Asn Asn Met Met Asn Ile Ala Asn Gly Pro His His Pro  
                     290                    295                    300  
 Asn Pro Pro Pro Glu Asn Val Gln Leu Val Asn Gln Tyr Val Ser Lys  
 305                    310                    315                    320  
 Asn Val Ile Ser Ser Glu His Ile Val Glu Arg Glu Ala Glu Thr Ser  
                     325                    330                    335  
 Phe Ser Thr Ser His Tyr Thr Ser Thr Ala His His Ser Thr Thr Val  
                     340                    345                    350  
 Thr Gln Thr Pro Ser His Ser Trp Ser Asn Gly His Thr Glu Ser Ile  
                     355                    360                    365  
 Leu Ser Glu Ser His Ser Val Ile Val Met Ser Ser Val Glu Asn Ser  
                     370                    375                    380

B1  
 Cont

Arg His Ser Ser Pro Thr Gly Gly Pro Arg Gly Arg Leu Asn Gly Thr  
 385 390 395 400  
 Gly Gly Pro Arg Glu Cys Asn Ser Phe Leu Arg His Ala Arg Glu Thr  
 405 410 415  
 Pro Asp Ser Tyr Arg Asp Ser Pro His Ser Glu Arg Tyr Val Ser Ala  
 420 425 430  
 Met Thr Thr Pro Ala Arg Met Ser Pro Val Asp Phe His Thr Pro Ser  
 435 440 445  
 Ser Pro Lys Ser Pro Pro Ser Glu Met Ser Pro Pro Val Ser Ser Met  
 450 455 460  
 Thr Val Ser Met Pro Ser Met Ala Val Ser Pro Phe Met Glu Glu Glu  
 465 470 475 480  
 Arg Pro Leu Leu Leu Val Thr Pro Pro Arg Leu Arg Glu Lys Lys Phe  
 485 490 495  
 Asp His His Pro Gln Gln Phe Ser Ser Phe His His Asn Pro Ala His  
 500 505 510  
 Asp Ser Asn Ser Leu Pro Ala Ser Pro Leu Arg Ile Val Glu Asp Glu  
 515 520 525  
 Glu Tyr Glu Thr Thr Gln Glu Tyr Glu Pro Ala Gln Glu Pro Val Lys  
 530 535 540  
 Lys Leu Ala Asn Ser Arg Arg Ala Lys Arg Thr Lys Pro Asn Gly His  
 545 550 555 560  
 Ile Ala Asn Arg Leu Glu Val Asp Ser Asn Thr Ser Ser Gln Ser Ser  
 565 570 575  
 Asn Ser Glu Ser Glu Thr Glu Asp Glu Arg Val Gly Glu Asp Thr Pro  
 580 585 590  
 Phe Leu Gly Ile Gln Asn Pro Leu Ala Ala Ser Leu Glu Ala Thr Pro  
 595 600 605  
 Ala Phe Arg Leu Ala Asp Ser Arg Thr Asn Pro Ala Gly Arg Phe Ser  
 610 615 620  
 Thr Gln Glu Glu Ile Gln Ala Arg Leu Ser Ser Val Ile Ala Asn Gln  
 625 630 635 640  
 Asp Pro Ile Ala Val  
 645

<210> 94

<211> 56

<212> PRT

<213> Homo sapiens

<400> 94

Gly Thr Ser His Leu Val Lys Cys Gly Trp Asp Arg Glu Gly Phe Cys  
1 5 10 15  
Val Asn Gly Gly Glu Cys Phe Met Val Lys Asp Leu Ser Asn Pro Ser  
20 25 30  
Arg Tyr Leu Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln  
35 40 45  
Asn Tyr Val Ile Ala Ser Phe Tyr  
50 55

<210> 95

<211> 56

<212> PRT

<213> Homo sapiens

<400> 95

Gly Thr Ser His Leu Val Lys Cys Asp Lys Ser Arg Glu Gly Phe Cys  
1 5 10 15  
Val Asn Gly Gly Glu Cys Phe Met Val Lys Asp Leu Ser Asn Pro Ser  
20 25 30  
Arg Tyr Leu Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln  
35 40 45  
Asn Tyr Val Ile Ala Ser Phe Tyr  
50 55

<210> 96

<211> 56

<212> PRT

<213> Homo sapiens

<400> 96

Gly Thr Ser His Leu Val Lys Cys Ala Glu Lys Glu Lys Thr Phe Cys  
1 5 10 15  
Val Asn Gly Gly Glu Cys Tyr Lys Val Arg Ile Leu Ser Asn Pro Ser  
20 25 30  
Arg Tyr Leu Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln

35 40 45  
 Asn Tyr Val Ile Ala Ser Phe Tyr  
 50 55

<210> 97  
 <211> 56  
 <212> PRT  
 <213> Homo sapiens

<400> 97  
 Gly Thr Ser His Leu Val Lys Cys Ala Glu Lys Glu Lys Thr Phe Cys  
 1 5 10 15  
 Val Asn Gly Gly Glu Cys Phe Met Val Lys Asp Leu Ser Asn Tyr Gly  
 20 25 30  
 Tyr Leu Met Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln  
 35 40 45  
 Asn Tyr Val Met Ala Ser Phe Tyr  
 50 55

<210> 98  
 <211> 56  
 <212> PRT  
 <213> Homo sapiens

<400> 98  
 Gly Thr Ser His Leu Val Lys Cys Ala Glu Lys Glu Lys Thr Phe Cys  
 1 5 10 15  
 Val Asn Gly Gly Glu Cys Phe Met Val Lys Asp Leu Ser Asn Tyr Arg  
 20 25 30  
 Tyr Arg Met Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln  
 35 40 45  
 Asn Tyr Val Ile Ala Ser Phe Tyr  
 50 55

<210> 99  
 <211> 56  
 <212> PRT  
 <213> Homo sapiens

<400> 99

Gly Thr Ser His Leu Val Lys Cys Ala Glu Lys Glu Lys Thr Phe Cys  
1 5 10 15  
Val Asn Gly Gly Glu Cys Phe Met Val Lys Asp Leu Ser Asn Thr His  
20 25 30  
Tyr Arg Met Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln  
35 40 45  
Asn Tyr Val Met Ala Ser Phe Tyr  
50 55

<210> 100

<211> 56

<212> PRT

<213> Homo sapiens

<400> 100

Gly Thr Ser His Leu Val Lys Cys Ala Glu Lys Glu Lys Thr Phe Cys  
1 5 10 15  
Val Asn Gly Gly Glu Cys Phe Met Val Lys Asp Leu Ser Asn Thr Lys  
20 25 30  
Tyr Arg Gly Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln  
35 40 45  
Asn Tyr Val Met Ala Ser Phe Tyr  
50 55

<210> 101

<211> 56

<212> PRT

<213> Homo sapiens

<400> 101

Gly Thr Ser His Leu Val Lys Cys Ala Glu Lys Glu Lys Thr Phe Cys  
1 5 10 15  
Val Asn Gly Gly Glu Cys Phe Met Val Lys Asp Leu Ser Asn Pro Ser  
20 25 30  
Arg Tyr Leu Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln  
35 40 45

Trp Tyr Val Ile Ala Ser Phe Tyr  
50 55

<210> 102

<211> 56

<212> PRT

<213> Homo sapiens

<400> 102

Gly Thr Ser His Leu Val Lys Cys Ala Glu Lys Glu Lys Thr Phe Cys  
1 5 10 15  
Val Asn Gly Gly Glu Cys Phe Met Val Lys Asp Leu Ser Asn Pro Ser  
20 25 30  
Arg Tyr Leu Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln  
35 40 45  
His Tyr Val Ile Ala Ser Phe Tyr  
50 55

<210> 103

<211> 56

<212> PRT

<213> Homo sapiens

<400> 103

Gly Thr Trp Glu Leu Val Pro Cys Gly Trp Asp Arg Glu Gly Phe Cys  
1 5 10 15  
Val Asn Gly Gly Glu Cys Phe Met Val Lys Asp Leu Ser Asn Pro Ser  
20 25 30  
Arg Tyr Leu Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln  
35 40 45  
Asn Tyr Val Ile Ala Ser Phe Tyr  
50 55

<210> 104

<211> 56

<212> PRT

<213> Homo sapiens

<400> 104

Gly Thr Ser His Leu Val Lys Cys Ala Glu Lys Glu Lys Thr Phe Cys  
1 5 10 15  
Val Asn Gly Gly Glu Cys Phe Met Val Lys Asp Leu Ser Asn Tyr Gly  
20 25 30  
Tyr Leu Met Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln  
35 40 45  
Asn Tyr Val Ile Ala Ser Phe Tyr  
50 55

<210> 105

<211> 56

<212> PRT

<213> Homo sapiens

<400> 105

Gly Thr Ser His Leu Val Lys Cys Gly Glu Glu Arg Glu Gly Phe Cys  
1 5 10 15  
Val Asn Gly Gly Glu Cys Tyr Arg Val Lys Thr Leu Ser Asn Pro Ser  
20 25 30  
Arg Tyr Leu Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln  
35 40 45  
Asn Tyr Val Met Ala Ser Phe Tyr  
50 55

<210> 106

<211> 56

<212> PRT

<213> Homo sapiens

<400> 106

Gly Thr Ser His Leu Val Lys Cys Gly Glu Glu Arg Glu Gly Phe Cys  
1 5 10 15  
Val Asn Gly Gly Glu Cys Phe Met Val Lys Asp Leu Ser Asn Tyr Gly  
20 25 30  
Tyr Leu Met Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln  
35 40 45  
Asn Tyr Val Met Ala Ser Phe Tyr

50

55

&lt;210&gt; 107

&lt;211&gt; 56

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 107

Gly	Thr	Ser	His	Leu	Val	Lys	Cys	Gly	Glu	Glu	Arg	Glu	Gly	Phe	Cys
1				5				10					15		
Val	Asn	Gly	Gly	Glu	Cys	Tyr	Arg	Val	Lys	Thr	Leu	Ser	Asn	Tyr	Gly
			20					25					30		
Tyr	Leu	Met	Cys	Lys	Cys	Pro	Asn	Glu	Phe	Thr	Gly	Asp	Arg	Cys	Gln
			35					40					45		
Asn	Tyr	Val	Met	Ala	Ser	Phe	Tyr								
50							55								

&lt;210&gt; 108

&lt;211&gt; 56

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 108

B1  
Cont

Gly	Thr	Ser	His	Leu	Val	Lys	Cys	Gly	Glu	Glu	Arg	Glu	Gly	Phe	Cys
1				5				10					15		
Val	Asn	Gly	Gly	Glu	Cys	Phe	Met	Val	Lys	Asp	Leu	Ser	Asn	Pro	Ser
			20					25					30		
Arg	Tyr	Leu	Cys	Lys	Cys	Pro	Asn	Glu	Phe	Thr	Gly	Asp	Arg	Cys	Gln
			35					40					45		
Asn	Tyr	Val	Ile	Ala	Ser	Phe	Tyr								
50							55								

&lt;210&gt; 109

&lt;211&gt; 56

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 109

Gly Thr Ser His Leu Val Lys Cys Ala Glu Lys Glu Lys Thr Phe Cys  
 1 5 10 15  
 Val Asn Gly Gly Glu Cys Tyr Arg Val Lys Thr Leu Ser Asn Tyr Gly  
 20 25 30  
 Tyr Leu Met Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln  
 35 40 45  
 Asn Tyr Val Met Ala Ser Phe Tyr  
 50 55

<210> 110

<211> 56

<212> PRT

<213> Homo sapiens

<400> 110

Gly Thr Ser His Leu Val Lys Cys Ala Glu Lys Glu Lys Thr Phe Cys  
 1 5 10 15  
 Val Asn Gly Gly Glu Cys Tyr Arg Val Lys Thr Leu Ser Asn Tyr Gly  
 20 25 30  
 Tyr Leu Met Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln  
 35 40 45  
 Asn Tyr Val Ile Ala Ser Phe Tyr  
 50 55

<210> 111

<211> 56

<212> PRT

<213> Homo sapiens

<400> 111

Gly Thr Ser His Leu Val Lys Cys Ala Glu Lys Glu Lys Thr Phe Cys  
 1 5 10 15  
 Val Asn Gly Gly Glu Cys Tyr Arg Val Lys Thr Leu Ser Asn Pro Ser  
 20 25 30  
 Arg Tyr Leu Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln  
 35 40 45  
 Asn Tyr Val Ile Ala Ser Phe Tyr  
 50 55

<210> 112  
<211> 56  
<212> PRT  
<213> Homo sapiens

<400> 112

Gly Thr Ser His Leu Val Lys Cys Gly Glu Glu Arg Glu Gly Phe Cys  
1 5 10 15  
Val Asn Gly Gly Glu Cys Tyr Arg Val Lys Thr Leu Ser Asn Pro Ser  
20 25 30  
Arg Tyr Leu Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln  
35 40 45  
Asn Tyr Val Ile Ala Ser Phe Tyr  
50 55

<210> 113  
<211> 56  
<212> PRT  
<213> Homo sapiens

<400> 113

Gly Thr Ser His Leu Val Lys Cys Gly Glu Glu Arg Glu Gly Phe Cys  
1 5 10 15  
Val Asn Gly Gly Glu Cys Phe Met Val Lys Asp Leu Ser Asn Tyr Gly  
20 25 30  
Tyr Leu Met Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln  
35 40 45  
Asn Tyr Val Ile Ala Ser Phe Tyr  
50 55

<210> 114  
<211> 56  
<212> PRT  
<213> Homo sapiens

<400> 114

Gly Thr Ser His Leu Val Lys Cys Gly Glu Glu Arg Glu Gly Phe Cys

1 5 10 15  
 Val Asn Gly Gly Glu Cys Tyr Arg Val Lys Thr Leu Ser Asn Tyr Gly  
 20 25 30  
 Tyr Leu Met Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln  
 35 40 45  
 Asn Tyr Val Ile Ala Ser Phe Tyr  
 50 55

<210> 115  
 <211> 56  
 <212> PRT  
 <213> Homo sapiens

<400> 115  
 Gly Thr Ser His Leu Val Lys Cys Ala Glu Lys Glu Lys Thr Phe Cys  
 1 5 10 15  
 Val Asn Gly Gly Glu Cys Tyr Arg Val Lys Thr Leu Ser Asn Tyr Gly  
 20 25 30  
 Tyr Leu Met Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln  
 35 40 45  
 His Tyr Val Ile Ala Ser Phe Tyr  
 50 55

<210> 116  
 <211> 56  
 <212> PRT  
 <213> Homo sapiens

<400> 116  
 Gly Thr Ser His Leu Val Lys Cys Gly Glu Glu Arg Glu Gly Phe Cys  
 1 5 10 15  
 Val Asn Gly Gly Glu Cys Tyr Arg Val Lys Thr Leu Ser Asn Tyr Gly  
 20 25 30  
 Tyr Leu Met Cys Lys Cys Pro Asn Glu Phe Thr Gly Asp Arg Cys Gln  
 35 40 45  
 His Tyr Val Ile Ala Ser Phe Tyr  
 50 55